



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,182	02/11/2002	Tatsuya Konagaya	Q68389	2952
7590	08/11/2004		EXAMINER	
SUGHRUE, MION, ZINN, MACPEAK & SEAS 2100 Pennsylvania Avenue, N.W. Washington, DC 20037				PUNNOOSE, ROY M
		ART UNIT	PAPER NUMBER	
		2877		

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/071,182	KONAGAYA, TATSUYA
	Examiner Roy M. Punnoose	Art Unit 2877

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) Responsive to communication(s) filed on \_\_\_\_.
- 2a) This action is **FINAL**.                                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_ is/are allowed.
- 6) Claim(s) 1-23 is/are rejected.
- 7) Claim(s) \_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 11 February 2002 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_.

**DETAILED ACTION*****Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-2, 4-7, 10-14, 16-19, and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakura (JP 408137413A).

3. With regard to claims 1, 4-7, 11-14, 16-19 and 22-23, Asakura discloses an inspecting method for light sources comprising receiving the light from each light emitting elements 2, 2a, 3, 3a, 4, 4a, with a photoelectric converter, the light being received without passing through an original, converting the received light into a signal, photoelectric displaying a light-emission state of each of said light emitting elements and on the basis of said photoelectric signal, inspecting said light source by watching said light-emission states of said light emitting elements (see Constitution).

However, Asakura's method is for inspecting an array of light emitting diodes of a semiconductor light emitting element display device and Asakura does not disclose that the inspecting method for light sources is for inspecting the light sources of an image reader.

In view of Asakura's teaching, it would have been obvious to one of ordinary skills in the art at the time the invention was made to incorporate Asakura's LED light source inspection method for inspecting any of a variety of different types of light sources so that an array of light sources can easily be inspected for any defect in any

individual light source with ease and efficiency and without any strain to the human eye in a manufacturing environment.

With regard to the automatic judging means of claim 18, it is old and well known in the art that once a signal is received from any type of sensing device including a photoelectric converter, a computer/processor is used for judging to check if the signal is within a certain tolerance level or any other predetermined set of criteria in a test environment. Therefore, it would have been obvious to one of ordinary skills in the art at the time the invention was made to have a judging means in an inspection method for inspecting any defect in a light source with ease and efficiency and without any strain to the human eye in a manufacturing environment.

It is noted that Asakura does not explicitly disclose that the CCD camera is connected to a display/monitor for inspecting the light sources. However, Akasura explicitly disclose (in the constitution) that inspection of the light source is performed by viewing. It is generally known in the art that when the inspection of an object is performed visually or by viewing, and if a CCD camera is included, then a display/monitor connected to the CCD camera is used for displaying the object under inspection on the display/monitor so that said object can be viewed on the display/monitor. Therefore, it would have been obvious to one of ordinary skills in the art at the time the invention was made to have an inspection device comprising a display/monitor connected to the CCD camera for displaying the object under inspection on the display/monitor so that said object can be viewed on the display/monitor for inspecting any defect in a light source with ease and efficiency and without any strain to the human eye in a manufacturing environment.

Art Unit: 2877

4. Claims 10 and 21 are rejected because, in view of Asakura's teaching, it would have been obvious to one of ordinary skills in the art at the time the invention was made to incorporate Asakura's LED light source inspection method for inspecting any of a variety of different types of light sources including infrared light sources, so that an array of light sources can easily be inspected for any defect in any individual light source with ease and efficiency and without any strain to the human eye in a manufacturing environment.

Claims 2, 7, 14 and 19 are rejected because the detachable diffusing member does not positively contribute in any way or manner in inspecting of the light sources. In fact, detachable diffusing member has to be removed for inspecting the light sources.

Additionally, it is well known in the art that image reading devices comprise diffusing elements for dispersing and uniformly distributing light from a plurality of light sources to a substrate placed adjacent to the diffusing member. It is also obvious to one of ordinary skill in the art at the time the invention was made to remove the diffusion member from the optical axis between the light sources and the photoelectric converter so that the output of the light sources can be directly imaged by the photoelectric converter for the purpose of inspecting the light sources so that any defect(s) in the light sources can easily and efficiently be detected.

5. Claims 3, 8-9, 15 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asakura (JP 408137413A) in view of what is commonly known in the art.

Asakura teaches all claim limitations as disclosed above except for the use of a lens to project an image of the light sources under inspection onto a photoelectric

Art Unit: 2877

converter such as a CCD in an inspection method for inspecting any of a variety of different types of light sources so that an array of light sources can easily be inspected for any defect in any individual light source with ease and efficiency and without any strain to the human eye in a manufacturing environment.

Use of a lens to project an image of an object under inspection onto a photoelectric converter such as a CCD in an inspection method for inspecting any of a variety of objects is well known in the art.

In view of what is well known in the art, it would have been obvious to one of ordinary skills in the art at the time the invention was made to incorporate a projection lens for projecting the image of an object under inspection into an inspection method for inspecting any of a variety of different types of light sources so that an array of light sources can easily be inspected for any defect in any individual light source with ease and efficiency and without any strain to the human eye in a manufacturing environment.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Roy M. Punnoose** whose telephone number is **571-272-2427**. The examiner can normally be reached on 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Gregory J Toatley, Jr.** can be reached on **571-272-2800 ext 77**. The fax phone number for the organization where this application or proceeding is assigned is **703-872-9306**.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2877

published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Roy M. Punnoose**  
Patent Examiner  
Art Unit 2877  
August 09, 2004

  
*for*

---

**Gregory J Toatley, Jr.**  
Supervisory Patent Examiner